MISSILE DEFENSE AGENCY
Fact Sheet

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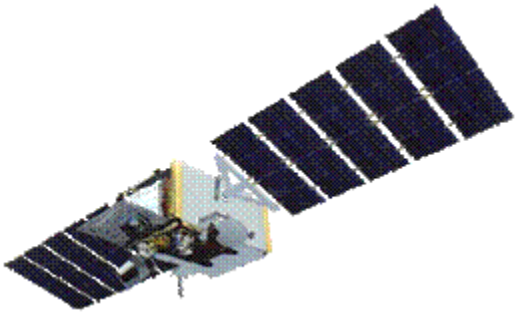
Space Tracking and Surveillance System



The Missile Defense Agency (MDA) is pursuing the Space Tracking and Surveillance System (STSS) program as a space-based sensor component of the Ballistic Missile Defense System (BMDS). Using sensors capable of detecting visible and infrared light, the STSS constellation of satellites will become part of a collection of land-, sea-, air-, and space-based BMDS sensors.

Program Overview

- On Sept. 25, 2009, MDA, NASA, and the Air Force teamed to successfully launch two tandem satellites into low earth orbit on a NASA Delta II launch vehicle from Cape Canaveral, Florida.
- Both satellites are currently operating nominally under the control of the Missile Defense Space Experiments Center and are undergoing a series of System Functionality Testing to ensure all major spacecraft and payload functions are checked and sensors are successfully calibrated in order to begin System Performance Testing.
- The STSS Demonstration Program will provide missile defense sensor risk reduction concepts in support of the development and fielding of a future missile defense operational satellite constellation.

Program Update

- STSS Demo Satellites have participated in MDA missile tests BVT-01, FTX-07 and FTT-14, met all test objectives, and confirmed the ability to track missile targets with the acquisition sensors on both spacecrafts.
- Track Sensor calibration is on track for participation in the next missile test.

Program Outlook

- After initial on-orbit checkout, performance will be characterized through a series of flight tests with ground, airborne, resident space objects, and ballistic missile targets.
- The purpose of the flight tests is to demonstrate the ability to meet national defense requirements to close the fire control loop with BMDS interceptors using space-based infrared tracking information.
- Critical Engagement Conditions and Empirical Measurement Events will be collected during flight tests as outlined in the MDA's Integrated Master Test Plan (IMTP v10.0).
- MDA will use early on-orbit testing of the Demonstration Program satellites to refine software and processes to enhance the usefulness of the demonstration satellites.
- The tracking of enemy missiles in all phases of flight and the passing of missile track data to the integrated BMDS will be demonstrated during these performance tests.
- The Demo satellites will test and demonstrate key knowledge areas in:
    - Birth-to-death tracking of strategic and tactical missiles
    - Ability to hand-off timely midcourse track data to the BMDS kill chain
    - Integrated space-based tracking in support of missile defense
- STSS Demonstration Satellites will provide invaluable engineering and integration data for development of a follow-on operational BMDS Space Layer for accurate and timely object tracking and reporting of missile attacks against U.S., its allies, and deployed forces.